Patent claims

1. Pharmaceutical compositions, containing as active compound a substance which inhibits the activity of TGFβ on tumour cells of epithelial origin, for the treatment of epithelial, invasive tumour diseases, which are characterised by a reversible transition of the cells from an epithelial, non-invasive state into an invasive state.

2. Pharmaceutical compositions according to claim 1, containing as an additional active compound a substance which inhibits the expression or function of oncogenic Ras, and/or the overexpression of normal Ras and/or the activation of normal Ras by receptor tyrosinekinases in the cells.

3. Pharmaceutical compositions according to claim 2, containing as Ras inhibitor a substance which directly inhibits the activation of Ras.

4. Pharmaceutical compositions according to claim 1 or 2, containing as Ras inhibitor a substance which indirectly inhibits the activation of Ras.

5. Pharmaceutical compositions according to claim 4, characterised in that the substance is an inhibitor of a receptor-tyrosinekinase.

6. Pharmaceutical compositions according to claim 5, characterised in that the substance is an inhibitor of the EGF receptor.

7. Pharmaceutical compositions according to one of claims 1 to 6 for treating tumour diseases by

changing already established, invasive tumour cells back into a non-invasive, epitheloid state.

8. Pharmaceutical compositions according to one of claims 1 to 7 for treating breast tumours.

9. Pharmaceutical compositions according to one of claims 1 to 7 for treating kidney cell carcinomas.

10. Process for screening pharmacologically active substances for the treatment of epithelial, invasive tumour diseases which are characterised by a reversible transition of the cells from an epithelial, non-invasive state into an invasive state, characterised in that the activity of test substances on the signal transmission pathway initiated by TGFβ in the human cell is determined.

11. Process according to claim 10, characterised in that mammalian cells are grown which are transformed with
a) a plasmid containing a reporter gene which is under the control of the regulatory sequence of a cell protein regulated by TGFβ;
b) a plasmid containing the sequence coding for a functional human TGFβ receptor;
in that the TGFβ receptor ligand is activated, test substances are applied to the cells and the modulation of the reporter gene expression brought about by the test substance is measured.

12. Process according to claim 11, characterised in that the cells are transformed with the TGFβ receptor type II.

13. Process according to claim 11 or 12, characterised in that the reporter gene is under the control of the

regulatory sequence of the plasminogen activator inhibitor.

14. Process according to claim 10, characterised in that the activity of test substances on the signal transmission pathway initiated by TGFβ in the human cell is determined by measuring the modulation of the autophosphorylation of the TGFβ receptor type II or its cytoplasmic domain by the test substance.

15. Process according to claim 10, characterised in that the activity of test substances on the signal transmission pathway initiated by TGFβ in the human cell is determined by measuring the modulation, by the test substance, of the ability of the TGFβ receptor type II to phosphorylate the TGFβ receptor type I or its GS domain.